

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) A cooling system for use in a vehicle, comprising:
 - an electric motor comprising a housing and an airflow path through the motor for cooling the motor, said housing comprising a front wall and a generally cylindrical side wall;
 - a fan comprising a hub having a connector for mounting to a shaft of said electric motor, said hub having a planar portion and a generally cylindrical portion, said planar portion lying in a radial plane that is generally parallel to a plane in which said front wall of said housing lies and said generally cylindrical portion lying, comprising at least a portion of said cylindrical portion extending over said generally cylindrical side wall of said housing by a second dimension;
 - a plurality of fan blades extending radially from said hub;
 - a plurality of ribs situated between said connector and said hub;
 - a circumferential flange that extends radially outward from motor case said generally cylindrical side wall; and

said plurality of ribs and the space between the ribs under the hub cooperating with said housing and said flange to define a channel for moving air from said airflow path into a second airflow path of air generated by said plurality of fan blades. said planar portion being axially spaced from said front wall by a first dimension and said generally cylindrical portion being spaced from said cylindrical side wall by a second dimension in order to define an airflow path comprising a first pressure area and a second pressure area that is in fluid communication with said first pressure area, said first dimension being smaller than said second dimension;

said cylindrical flange positioned on said generally cylindrical side wall in opposed relation to said planar portion of said hub and downstream of an edge of said generally cylindrical portion of said hub, said cylindrical flange further being adapted and dimensioned to facilitate cooling flow drawn through the electrical motor and the airflow passageway.

2. (Currently Amended) The cooling system as recited in claim 1 wherein housing comprises a front face and a side, at least a portion of at least one of said plurality of ribs is situated in operative relationship with said generally cylindrical side wall.

3.(Original) The cooling system as recited in claim 1 wherein at least one of said plurality of ribs is generally L-shaped.

4.(Original) The cooling system as recited in claim 2 wherein at least one of said plurality of ribs is generally L-shaped.

5.(Currently Amended) The cooling system as recited in claim 1 wherein at least one of said plurality of ribs comprises a portion that is situated in opposed relation to a said front wall of said electric motor and a second portion situated in opposed relation to said generally cylindrical a side wall of said electric motor in order to provide said a channel for channeling air from said airflow path into said second airflow path.

6.(Currently Amended) The cooling system as recited in claim 1 wherein said channel defines a first pressure area and said an area outside said channel defines a second pressure area, pressure in said first pressure area being lower than pressure in said second pressure area.

7.(Currently Amended) The cooling system as recited in claim 5 wherein said channel defines a first pressure area and said an area outside said channel defines a second pressure area, said first pressure area being having a pressure that is lower than said second pressure area.

8. (Currently Amended) The cooling system as recited in claim 1 wherein said plurality of ribs are shaped to define a generally cylindrical area for receiving a front

portion of said electric motor in order to create said a channel to direct airflow from said airflow path into said second airflow path and toward an inlet of said airflow path, at least a portion of each of said plurality of ribs surrounding said housing.

9 – 17 (Cancelled)

18. (Currently Amended) A method for cooling an electric motor, said method comprising the steps of:

providing an electric motor having an airflow passageway, said electric motor comprising a cover having a front wall and a generally cylindrical side wall; and
providing a fan comprising a hub having a connector for mounting to a shaft of
said electric motor, said hub having a planar portion and a generally cylindrical portion,
said planar portion lying in a radial plane that is generally parallel to a plane in which
said front wall lies and is spaced from said front wall by a first distance and a generally
cylindrical portion that lies in a cylindrical plane, at least a portion of said generally
cylindrical portion extending over a cylindrical side wall of said cover and being spaced
therefrom by a second distance, said first distance being smaller than said second
distance, said fan further comprising a plurality of fan blades extending radially from
said hub and a plurality of ribs situated between said connector and said hub;

situating said a fan comprising a hub for mounting on a shaft of said electric motor, said hub cooperating with the easing said cover of said electric motor to form a

low pressure area that communicates with said airflow passageway to facilitate airflow through said airflow passageway; and

providing a circumferential flange on said cover and downstream of said generally cylindrical portion of said hub, said circumferential flange extending radially outward from said cylindrical side wall of said cover and in generally opposed relationship to said planar portion of said hub and downstream of an edge of said generally cylindrical side wall of said hub to maximize a low pressure level in at least a portion of said airflow passageway to facilitate cooling flow drawn through the electrical motor.

19. (Currently Amended) The method as recited in claim 18 wherein said method further comprises the step of:

providing a hub having a plurality of ribs configured to cooperate with a housing said cover on said electric motor to provide said low pressure area.

20. (Currently Amended) The method as recited in claim 19 wherein said plurality of ribs are each generally L-shaped and define a portion situated in opposed relation to a front said front wall of said electric motor cover and a portion situated in opposed relation to said generally cylindrical a side wall of said electric motor cover.

21. Cancelled

22. (Currently Amended) The method as recited in claim 24-20 wherein said method further comprises the step of :

providing said plurality of L-shaped ribs comprises a first leg portion opposed to said front wall of said electric motor and a second leg portion opposing said generally cylindrical portion of said hub, said first leg portion having an axial width that is less than a radial width of said second leg portion, and said second leg portion having different axial widths so that they are situated at least partially around the housing of the electric motor to define said low pressure area.

23 - 37 (Cancelled)